

CLAIMS

1. A sound wave guide structure for a speaker system comprising:
a sound passage space connecting an inlet opening to an outlet opening;
the sound passage space being configured to branch in plural stages in a range from the inlet opening to the outlet opening to form a plurality of sound wave guide paths extending from the inlet opening to the outlet opening.
2. The sound wave guide structure for a speaker system according to claim 1, wherein the plurality of sound wave guide paths extend in a line shape from the inlet opening to the outlet opening.
3. The sound wave guide structure for a speaker system according to claim 1 or 2, wherein center axes of the plurality of sound wave guide paths are included in a flat plane.
4. The sound wave guide structure for a speaker system according to claim 1 or 2, wherein center axes of the plurality of sound wave guide paths are included in a curved plane or a bent plane.
5. The sound wave guide structure for a speaker system according to any one of claims 1 to 4, wherein the outlet opening has a slit shape, and the sound wave guide path branches at respective branch points in a longitudinal direction of a slit of the outlet opening.
6. The sound wave guide structure for a speaker system according to claim 5, wherein the outlet opening of the slit shape extends in a straight line shape.

7. The sound wave guide structure for a speaker system according to claim 5, wherein the outlet opening of the slit shape extends to be curved in a convex curved line shape.
8. The sound wave guide structure for a speaker system according to claim 5, wherein the outlet opening of the slit shape extends to be curved in a convex circular arc shape.
9. The sound wave guide structure for a speaker system according to claim 5, wherein the outlet opening of the slit shape extends to be curved in a concave curved line shape.
10. The sound wave guide structure for a speaker system according to claim 5, wherein the outlet opening of the slit shape extends to be curved in a concave circular arc shape.
11. The sound wave guide structure for a speaker system according to any one of claims 1 to 10, wherein almost all of the plurality of sound wave guide paths have a substantially equal path length.
12. The sound wave guide structure for a speaker system according to any one of claims 5 to 10, wherein the sound wave guide path having an outlet at a position closer to a center of the outlet opening of the slit shape has a shorter path length.
13. The sound wave guide structure for a speaker system according to any one of claims 5 to 10, wherein the sound wave guide path having an outlet at a position closer to a center of the outlet opening of the slit shape has a longer path length.
14. The sound wave guide structure for a speaker system according to any one of claims 11

to 13, wherein the path length is defined along a line passing through a middle point in a width direction of the path just after the branch point.

15. The sound wave guide structure for a speaker system according to any one of claims 1 to 14, wherein at least part of at least one of the plurality of sound wave guide paths extends in a curved line shape.

16. The sound wave guide structure for a speaker system according to any one of claims 1 to 14, wherein at least part of at least one of the plurality of sound wave guide paths extends in a S shape.

17. The sound wave guide structure for a speaker system according to any one of claims 1 to 16, wherein at least one of the plurality of sound wave guide paths has a largest height in an intermediate region between the inlet opening and the outlet opening of the sound passage space.

18. The sound wave guide structure for a speaker system according to claim 17, wherein the sound wave guide path has the largest height at the branch point thereof or in the vicinity of the branch point.

19. The sound wave guide structure for a speaker system according to any one of claims 1 to 18, wherein sound wave guide paths extending from the branch point merge at a merge point.

20. A horn speaker in which the sound wave guide structure for a speaker system

according to any one of claims 1 to 19 is applied to a throat portion thereof.